## REMARKS

This responds to the Advisory Action dated November 15, 2005. Claims 1, 7, 19, and 25 are amended; as a result claims 1-29 are pending in this application.

### *Reservation of the Right to Swear Behind References*

Applicant maintains its right to swear behind any references which are cited in a rejection under 35 U.S.C. §102(e). Statements distinguishing the claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

### *§102 Rejection of the Claims*

Claims 1-29 were rejected under 35 USC § 102(e) as being anticipated by Kadous (U.S. 2001/0036235 A1, "Kadous"). To anticipate a claim, the reference must teach every element of the claim.[1] A claim in dependent form shall be construed to incorporate by reference all of the limitations of the claim to which it refers.[2]

*Regarding claims 1-6:*

> Applicant cannot find in Kadous, among other things, any disclosure of
>
> "receiving an OFDM symbol from a communication channel, said OFDM symbol having a plurality of data subcarriers and a plurality of pilot symbols, and identifying subcarriers of interest, wherein the subcarriers of interest are a subset of the plurality of data subcarriers,"

as presently recited in independent claim 1 and incorporated into dependent claims 2-6.

Kadous describes multipl[ying] interpolation coefficient for each channel by the LS estimator to obtain final channel estimates.[3] The Final Office Action dated 8/18/2006 (hereinafter, "Final Office Action") states that herein every channel or subcarrier is considered as an interested subcarrier.[4] However, claim 1 recites that only subcarriers of interest are identified. The patent application teaches that this allows, among other things, tracking of subcarriers

---

[1] M.P.E.P. § 2131.
[2] 35 U.S.C. § 112 ¶4.
[3] Kadous ¶ 0032.
[4] Final Office Action pg. 3.

assigned to the corresponding user.[5] Thus, claim 1 recites that equalization coefficients are only generated for subcarriers of interest.

Additionally, Applicant cannot find in Kadous any disclosure of

"obtaining a first interpolation vector corresponding to a first subcarrier of interest from a plurality of stored interpolation vectors,"

as presently recited in independent claim 1 and incorporated into dependent claims 2-6. Kadous describes determining an interpolation coefficient from a series of estimations and calculations, and that a channel estimate is calculated for each channel,[6] instead of storing a plurality of interpolation vectors.

*Regarding claims 7-18:*

Applicant cannot find in Kadous, among other things,

"means for acquiring a stored interpolation vector associated with a first subcarrier of interest, wherein the first subcarrier of interest is a subset of the plurality of subcarriers,"

as recited in independent claim 7 and incorporated into dependent claims 8-18. Kadous describes finding an interpolation coefficient for each transmitting antenna, and that the interpolator matrix M is then multiplied by an LS estimate for each transmitting antenna to determine the channel estimate for each channel.[7]

*Regarding claims 19-24:*

Applicant cannot find in Kadous, among other things,

a subcarrier tracking unit to track subcarriers of interest, wherein the subcarriers of interest are a subset of the plurality of subcarriers,

as presently recited in independent claim 19 and incorporated into dependent claims 20-24. Kadous describes multiplying interpolation coefficient for each channel by the LS estimator to obtain final channel estimates.[8]

Additionally, Applicant cannot find in Kadous,

---

[5] Patent Application, pg. 13, lines 11-22 and Fig. 6.
[6] Kadous, pg. 2 ¶ 0020.
[7] Id.
[8] Kadous ¶ 0032.

AMENDMENT AND RESPONSE UNDER 37 C.F.R. 1.116 – EXPEDITED PROCEDURE             **Page 10**
Serial Number: 09/852,376             Dkt: 884.427US1 (INTEL)
Filing Date: May 10, 2001
Title: SPARSE CHANNEL ESTIMATION FOR ORTHOGONAL FREQUENCY DIVISION MULTIPLEXED SIGNALS
Assignee: Intel Corporation

> "an interpolation vector retrieval unit to retrieve an interpolation vector for each of said subcarriers of interest from a memory,"

as presently recited in independent claim 19 and incorporated into dependent claims 20-24. Kadous describes determining an interpolation coefficient from a series of estimations and calculations, and that a channel estimate is calculated for each channel. [9]

*Regarding claims 25-29:*

> Applicant cannot find in Kadous, among other things,

> "determining a set of subcarriers of interest from an OFDM symbol having a plurality of data subcarriers and a plurality of pilot symbols, wherein the set of subcarriers of interest is a subset of the plurality of data subcarriers,"

as presently recited in independent claim 25 and incorporated into dependent claims 26-29. Kadous describes multiplying interpolation coefficient for each channel by the LS estimator to obtain final channel estimates. [10]

> Additionally, Applicant cannot find in Kadous,

> "obtaining a first interpolation vector corresponding to a first subcarrier of interest from a plurality of stored interpolation vectors,"

as presently recited in independent claim 25 and incorporated into dependent claims 26-29. Kadous describes determining an interpolation coefficient from a series of estimations and calculations, and that a channel estimate is calculated for each channel, [11] instead of storing a plurality of interpolation vectors.

> Applicant respectfully requests reconsideration and allowance of claims 1-29.

---

[9] Kadous, pg. 2 ¶ 0020.
[10] Kadous ¶ 0032.
[11] Kadous, pg. 2 ¶ 0020.

## *Conclusion*

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested.  The Examiner is invited to telephone Applicant's attorney at (612) 349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

ERIC A. JACOBSEN

By their Representatives,
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
Attorneys for Intel Corporation
P.O. Box 2938
Minneapolis, Minnesota 55402
(612) 349-9592

Date ~Feb. 21, 2006~          By _Ann M. McCrackin_
                                    Ann M. McCrackin
                                    Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8:  The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to:  Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this _21st_ day of February, 2006.

___Amy Moriarty___                              _____
Name                                            Signature